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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/675,584

09/30/2003

Melissa Ann Clark

030627/267409

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07/16/2008

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EXAMINER

FELTON, MICHAEL J

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

07/16/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/675,584	<b>Applicant(s)</b> CLARK ET AL.	
	<b>Examiner</b> MICHAEL J. FELTON	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 3,4,8,9,12-14,20,21,24-27 and 33-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3,4,8,9,12-14,20-21,24-27 and 33-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 4/25/2008 have been fully considered but they are not persuasive.
2. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Keith II et al. clearly indicate the shortcomings of cellulose acetate filter sections and provide one solution, that of a filled cavity. Other solutions available, such as that of Irby Jr. et al., which is a capsule in a filter segment. The examiner believes that it is obvious to, and would be well within the skill of one of ordinary skill in the art, to use known filter segments together. For example, combining the filter segments of Keith II et al. and Irby Jr. et al. would result in a plug-space-plug filter with one of the plugs replaced with the plug and capsule design of Irby Jr. et al. The applicant alleges that the only way to combine the references would be to have the capsule of Irby Jr. et al. wetting the materials in the cavity of Keith II et al. This is not the case. There could also be adsorbents located in the filter segment in which the capsule is located as taught by Irby

Jr. et al. thereby allowing the invention of Irby Jr et al. to be easily "plugged into" the invention of Keith II et al.

3. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the present invention is to avoid mixing the liquid from the capsule with the adsorbent material) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

4. The applicant alleges that a reference of record teaches away from the combination of Keith and Schneider. Because this reference is not relied upon, it is immaterial to the current rejection. In addition, the reference does not appear to teach away because there appears to be no indication that the combination of references as used in the rejection would not work. In addition, the applicant suggests that because Schneider does not disclose the use of an adsorbent, that the reference is not applicable. This is not the case as the reasons for combining do not require Schneider to include a adsorbent section, as this section is taught by Keith II et al.

#### ***Information Disclosure Statement***

5. An letter indicating that an European Search Report is attached to the submission for the examiner's consideration was received on 3/26/2008. However no

search report appears as part of the record. The applicant is advised to resend the European Search Report for consideration.

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 27, 3, 8, 13, 14, 33, 20-25, 34-41, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keith II et al. (US 3,251,365) in view of Irby Jr. et al. (US 3,390,686).

2. Regarding claims 27, 3, Keith II et al., disclose that cellulose acetate filters do not removal all the harmful constituents of tobacco smoke (col. 2, 15-17). One solution disclosed is to use "well-known absorbents such as activated charcoal, alumina, natural and synthetic clays and silica gel" (col. 2, 23-30), and that these materials can be segregated from the cellulose acetate filter (col. 2, 70-72; col. 3, 1-5).. Keith II et al. also

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disclose a structure using two conventional filter plugs and forming a cavity between them, and the filter plugs can be made from plasticized cellulose acetate (col. 4, 7-39). However, Keith II et al. do not teach a compartment within the first section of filter material, a breakable capsule within the compartment, or a first filter section with outer and inner annular components.

3. Irby Jr. et al. disclose the incorporation of a breakable capsule within a filter section, including a filter section comprising an outer annular filter material surrounding a cavity and inner filter material (figure 2; col. 4, 1-17). The outer material is formed to create a cavity in which the capsule and inner material is located. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the filter section of Irby Jr. et al., with its use of liquid smoke treating technique with the filter assembly of Keith II et al. because Keith II et al. suggests that cellulose acetate filters are not effective to removal all the harmful constituent of tobacco smoke, and it is well known, and well within the skill, of one in the art that one type of filter segment can be substituted for another type of filter segment in a filter assembly.

4. Regarding claims 3, 4, 33, Keith II et al. discloses the use of plasticized cellulose acetate tow with a denier per filament between 1.5 and 25, and with a total denier between 30,000 and 90,000. Although Irby Jr. et al. disclose using foam in the annular first filter, it would have been obvious to one of ordinary skill in the art at the time of invention to have tried the more commonly used cellulose acetate tow.

5. Particle sizes are also disclosed as being between 8 and 50 mesh

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6. Regarding claim 20, Irby Jr. et al. show a generally spherical shaped capsule in figure 2.

7. Regarding claim 21, Irby Jr. et al. disclose a capsule with a gelatin shell, a flavorant, and a diluting agent (water) (col. 3, 18-61).

8. Regarding claim 22, Irby Jr. et al. discloses that large capsules are made using conventional techniques used in the pharmaceutical industry. It would have been obvious to one of ordinary skill in the art that oils, including triglycerides, could be used as a dispersant instead of water and such dispersants are often used to dispense some pharmaceuticals (those not dissolvable in water). It would have been obvious that dispersing flavorings not soluble in water would have been more effective with oil based dispersants.

9. Regarding claims 24 and 25, Irby Jr. et al. disclose a capsule up to 0.12 inches (just over 3 mm), falling within the range of at least 3 mm, and less than 5 mm. (col. 3, 18-61).

10. Regarding claims 34-39, Irby Jr. et al. indicate that flavors, metal salts and activated charcoal (for altering smoke composition), and medicines can be added to the capsule. Lemon oil is one such flavor. (col. 3, 18-61). The examiner considers breath fresheners to be a subset of either medicines or flavors, and this would be obvious to one of ordinary skill.

11. Regarding claims 13, 14, 36, and 37 Keith II, et al., disclose activated carbon with a particle size of between 8 and 50 mesh (col. 5, 2-10), and adding between 85-100 mg of particles (col. 6, 30-55).

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12. Regarding claim 8 Keith II et al. disclose a filter assembly with a length of 20 mm, comprising two 7.5 mm cellulose acetate tow filter sections and a 5 mm absorbent filled cavity.

13. Regarding claim 40, Irby Jr. et al. do not disclose what percentage of the capsule's contents are flavoring. However, it would have been obvious to one of ordinary skill in the art to vary the amount of flavoring depending on the flavoring's potency and the desired design effect on the smoker.

14. Regarding claim 41, replacing one of the filter segments of Keith II et al. with the filter segment of Irby Jr. et al. would inherently change the particulate removal efficiency of the first versus the second filter segment.

15. Regarding claim 45, Irby Jr. et al. disclose using crimped paper along with capsules (col. 4, 1-20).

16. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keith II et al. (US 3,251,365) and Irby Jr. et al. (US 3,390,686) as applied to claims 27 and 9 above, in further view of Eichel (US 3,459,194).

17. Regarding claim 9, although Keith II et al. disclose a filter 20 mm in length, a longer filter is not expressly taught. However, it would have been obvious to one of ordinary skill in the art that a filter could be made longer to remove additional smoke constituents, improving marketability, and that it is common in the art to have filters of various lengths. In addition, Eichel discloses a cigarette filter with a length of 38 mm,



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and that filters for cigarettes are typically 1:3 to 1:2 in relation to the length of the tobacco rod (col. 4, 61-70), teaching that the length of the filter may be varied.

18. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keith II et al. (US 3,251,365) and Irby Jr. et al. (US 3,390,686) as applied to claims 27 and 37 above, in further view of Frund (US 5,714,126). Keith II et al. and Irby Jr. et al. do not disclose the activity of the activated carbon. However, Frund discloses using activated carbon to remove harmful gasses, with an activity of at least 95 Carbon Tetrachloride Activity (col. 2, line 6). It would have been obvious to one of ordinary skill in the art at the time of invention to have used carbon with sufficient activity, as disclosed by Frund, to achieve removal of harmful gasses in the cigarette smoke.

19. Claims 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keith II et al. (US 3,251,365) and Irby Jr. et al. (US 3,390,686) as applied to claims 27 and 9 above, in further view of Schneider (US 5,979,459).

20. Although the combination of Keith II et al. and Irby Jr. et al. would product filter segments with different particulate removal efficiency, Schneider discloses a first filter segment made of cellulose acetate with a denier per filament of 2.1 or less (col. 2, 39-44) and a second filter segment made of cellulose acetate tow with a denier per filament of 8 with a resistance to draw of less than 20mm of water column (col. 2, 45-49). Another embodiment is shown in figure 2, with a first filter plug (26) with a denier per filament of 2.1 adjacent to the tobacco, followed by a coaxial filter segment, also made

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of cellulose acetate tow, with a minimum denier pre filament of 3 (example 2). In each case, Schneider clearly shows the use of a first filter material with lower weight per unit length (lower denier per fiber, between 1.8 and 2.5 denier per fiber) than the second filter material (between 3.0 and 10 denier per fiber).

21. It would have been obvious to one of ordinary skill in the art at the time of invention to use the different filter segments described by Schneider in the filter of Keith II et al. and Irby Jr. et al. because Schneider teaches using segments with different fiber deniers to optimize ventilation and air flow within the filter. One of ordinary skill would have known this to be applicable to any cigarette filter assembly.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL J. FELTON whose telephone number is (571)272-4805. The examiner can normally be reached on Monday to Friday, 7:30 AM to 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Phillip C. Tucker can be reached on 571-272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJF

/Philip C Tucker/  
Supervisory Patent Examiner, Art Unit 1791